

# *Pachysandra terminalis* P.F. von Siebold & J.G. Zuccarini Japanese Pachysandra

**Other Common Names:** Japanese Spurge, Pachysandra.

**Family:** *Buxaceae*.

**Cold Hardiness:** Useful in USDA zones 5(4) through 8(9a).

**Foliage:** Evergreen; alternate; simple; blade narrowly to broadly obovate; 2(1) to 4(0) long by 1/2(0) to 1 1/2(0) wide; glabrous; the upper surface is a dark glossy green, whereas the lower surface is a paler nearly yellowish green with the tertiary veins creating a faintly reticulate pattern; overall venation is pinnate with typically five main veins which appear lightly impressed and yellow green in color above and slightly raised beneath; the overall shape of the tip of the blade is acute to rounded with the distal quarter to third of the blade coarsely toothed or dentate; the remainder of the margin is entire; the base of the blade is elongated and cuneate, blending into the petiole which is half to nearly as long as the blade; the petiole is flattened above lending it a nearly winged appearance; the petiole is the same color as the blade.

**Flower:** Monoecious; the individual mildly fragrant flowers are very small and are borne in 1(0) to 2(0) long terminal spikes, female flowers at the bottom of the inflorescence, males at the top; flowers are creamy white in color and apetalous, but have sepals; flowering occurs in spring to mid-summer depending upon the region in which it is grown; flowers are not overwhelming in effect and are short-lived.

**Fruit:** Fruits are small 1/3(0) diameter oval white drupes; fruits are seldom produced in cultivation since cross-pollination is necessary for fruit set and plantings are typically clonal.

**Stem / Bark:** Stems — thick and rather sparsely branched with leaves clustered near the tip of the stem; glabrous; light to medium green; round in cross-section; Buds — extremely tiny, 1/32(0) to 1/64(0) long; adpressed to the stem; light green to yellow-green in color; Bark — not applicable.

**Habit:** Japanese Pachysandra is a 6(0) to 8(0) (12(0)) tall semi-woody herbaceous evergreen groundcover with upright sparsely branched stems arising from vigorous underground rhizomes; although somewhat slow to initially fill an area, this species is long-lived and given time and proper growing conditions will produce a luxuriant dense groundcover in shady locations; the overall texture is medium to medium-coarse.

**Cultural Requirements:** Japanese Pachysandra is one of the most widely utilized groundcovers for shady environments in cold temperate regions; successful cultivation in our region is generally confined to the Northeastern portions; while this species will tolerate some sun in cooler climates, it is suitable for our regional landscapes only where shade and fairly uniform soil moisture conditions can be provided; plants are not drought tolerant and perform best on neutral to acidic soils of good fertility; this species will not tolerate foot-traffic and is not a good choice where it will be disturbed by rambunctious children and pets; however, it is a more vigorous species than *P. procumbens*.

**Pathological Problems:** Plants are prone to chlorosis on high pH soils; avoid dry, sunny or exposed windy sites; although not often prone to serious pest or disease problems, plants can be occasionally afflicted with slugs, spider mites, aphids, nematodes, Euonymus scale, root rot (*Rhizoctonia*) or leaf blight (*Fusarium* spp. or *Volutella pachysandrae*).

**Ornamental Assets:** Japanese Pachysandra develops into a pleasant carpet-like medium-coarse textured groundcover that tolerates substantial shade; it is not as aggressive as some of our more vigorous groundcover species, hence *P. terminalis* is fairly well behaved in our regional landscapes.

**Limitations & Liabilities:** Plants are slow growing, intolerant of foot traffic, and have rather stringent site requirements.

**Landscape Utilization:** This species is popular as a medium to large scale groundcover in moist shady locations under large trees on fertile acidic soils; it serves as a good companion groundcover around various species of *Gardenia*, *Rhododendron* and *Camellia* due to their similar cultural requirements; the medium-coarse texture contrasts well with ferns, many of which also have similar cultural requirements.

**Other Comments:** Although plantings of this species tend to struggle in Texas, it is one of the more popular shade groundcovers in the Midwest and Northeastern U.S.; whenever I see this species, I can always picture the frustration on my Uncle Jim's face when one of us kids took a shortcut off his front porch through the never quite established planting of Japanese *Pachysandra* he nursed in the shade of two giant Silver Maples (*Acer saccharinum*); the poor things never stood a chance with dozens of neighbor kids and cousins running amuck in the yard; the genus name is derived from the Greek words for thick and masculine, in reference to the stout stamens in the flowers; the specific epithet refers to the terminal location of the inflorescences on the stems.

**Native Habitat:** Japan and North-central China.

**Related Taxa:** Some forms have been selected with silver or white variegation patterns, 'Variegata' and 'Silver Edge'; 'Green Carpet' is a denser smaller form with a nice dark foliage color; 'Green Sheen' is reputedly a more heat tolerant selection and might be preferred in our region to the species type.

***Pachysandra procumbens*** A. Michaux

**Alleghany *Pachysandra***

- C Also known as Alleghany Spurge; this clump-forming semi-evergreen herbaceous perennial is a native of the Alleghany Mountains and the Southeastern U.S.; it is sometimes grown as a substitute for the Asian exotic *P. terminalis*; the simple leaves of *P. procumbens* are a paler medium green to gray-green color with purple-brown mottling, are broadly ovate to suborbicular in shape, 30 to 50 long, have coarse apical toothing and are coarser textured than those of *P. terminalis*; the malodorous greenish purple to pinkish white flowers on *P. procumbens* are axillary and the 40 to 50 long inflorescences are located low on the stems, typically beneath the foliage; the fruit is a purplish capsule; plants eventually spread very slowly to serve as a herbaceous groundcover 60 to 120 tall.
- C Although a US native, this species is hardy only to USDA zones 5b (5a) through 8 (9a) and must be very carefully placed in the landscape; it absolutely requires a shady spot with a consistently moist soil, and is even more particular as to site conditions in our region than *P. terminalis*; it is best reserved for occasional use in Northeastern portions of our region as a small scale groundcover, herbaceous perennial, or rock garden plant; although technically semi-evergreen, old leaves tend to become tattered and worn looking by spring and should be cut back by late winter to make room for new growth.

**References:** Armitage, 1989; Besterling, 1998; MacKenzie, 1997; Odenwald et al., 1996; Still, 1994; Taylor et al., 1987; Terrell, 1989; Wyman, 1956.

Copyrighted 2004 with all rights reserved by Michael A. Arnold; intended for future inclusion in *Landscape Plants For Texas And Environs, Third Edition*.